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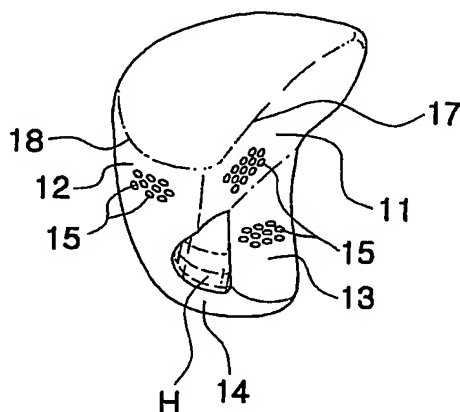
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(54) Title: THE DEVICE FOR RIGHT GRIP OF WRITING TOOLS

10



(57) Abstract: The present invention relates to a device for right grip of a writing tool. The device for right grip of a writing tool includes: a thumb seating part formed on the side wall surface of the lower portion of the thumb contact preventing part for seating the thumb thereon; an index finger seating part formed on the side wall surface of the lower portion of the index finger contact preventing part for seating the index finger thereon; a middle finger seating part downwardly extending from the front and lower portion of the body to a portion, where the writing tool and the user's middle finger are in contact with each other, for supporting a part of the middle finger and a coupling part for fixing the writing tool to the body at a predetermined angle. The device for right grip of the writing tool can naturally correct the user's wrong grip posture, and prevent loss of concentration power and deformity of fingers by reducing the user's fatigue generated during writing.

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THE DEVICE FOR RIGHT GRIP OF WRITING TOOLS

Technical Field

The present invention relates to a device for right grip of
5 a writing tool, and more particularly, to a device for right
grip of a writing tool, which has an ergonomically curved body,
and seating parts formed on specific parts of the body for
seating a user's thumb, index finger and middle finger in a
preferable posture, thereby naturally correcting a grip posture
10 at the same time with gripping of the writing tool.

Background Art

The wrong grip of a writing tool makes a user's,
particularly, children's fingers deformed, and strains the
15 user's fingers, wrist, shoulders, and so on.

In more detail, the right and preferable grip posture is
that a predetermined space part is formed between the thumb and
the index finger when the user's thumb and index finger grasp the
writing tool (see FIG. 11).

20 At this time, as excessive force is applied to meridian
point portions at the tips of the fingers if the user grasps the
writing tool for a long time period, the user's thumb and index
finger gradually comes in close contact with the writing tool,
and the thumb and the index finger also gradually comes in
25 contact with each other, and thereby, the volume of the space
part formed between the thumb and the index finger becomes
gradually reduced (see FIG. 12).

Such wrong grip posture is one of main causes of finger
deformity, and there is therefore a need for a writing tool,

which can provide an effective and natural grip posture capable of keeping a right gripping condition even though the user uses the writing tool for a long time.

5 Disclosure of Invention

Accordingly, the present invention has been made in view of the above problems, and it is an object of the present invention to provide a device for right grip of a writing tool, which includes a thumb seating part and an index finger seating part curved in the same form as a space portion formed between the thumb and the index finger, and a middle finger seating part extending to a portion, where the writing tool and the middle finger come in contact with each other, from the front and lower portion of the thumb and index finger seating parts so as to support a portion of the middle finger, thereby preventing a close contact between the thumb and the index finger by forcedly separating the thumb and the index finger.

Another object of the present invention to provide a device for right grip of a writing tool, which further includes a thumb support part formed on the lower portion of the thumb seating part for supporting the thumb, through holes formed in the thumb and index finger seating parts, the middle finger seating part and the thumb support part for absorbing sweat, and embossed portions for finger pressing and slip prevention, thereby allowing a user to use it more safely and agreeably.

To achieve the above objects, the present invention provides a device for right grip of a writing tool including: a body having a curved surface; a thumb contact preventing part and an index finger contact preventing part curved on the upper

surface of the body in the same form as a space formed between a user's thumb and index finger in a state where the user grasps the writing tool with the thumb and the index finger so as to prevent a close contact of the thumb and the index finger with the writing tool, the thumb contact preventing part and the index finger contact preventing part being in contact with the upper surface of the body; a thumb seating part formed on the side wall surface of the lower portion of the thumb contact preventing part for seating the thumb thereon; an index finger seating part formed on the side wall surface of the lower portion of the index finger contact preventing part for seating the index finger thereon; a middle finger seating part downwardly extending from the front and lower portion of the body to a portion, where the writing tool and the user's middle finger are in contact with each other, for supporting a part of the middle finger; and a coupling part for fixing the writing tool to the body at a predetermined angle.

It is preferable that the device for right grip of a writing tool further includes a thumb support part laterally extending from the middle finger seating part for supporting the thumb.

The coupling part may be an insertion hole perforating the body at a predetermined gradient for inserting and fixing the writing tool thereto.

The coupling part may be a groove cut on a side section of the body at a predetermined angle for forcibly fitting the writing tool into a side surface of the body.

The groove may be formed on a side portion of the thumb and index finger seating parts, which contacts the index finger, or

on the lower end surface of the body.

Furthermore, it is preferable that the coupling part has a slip prevention part formed on a portion which contacts the outer circumferential surface of the writing tool.

5 The slip prevention part is a frictional protrusion formed on the inner circumferential surface of the insertion hole or the inner surface of the groove.

It is preferable that a number of friction protrusions are in the form of a screw thread, a circle, or a semicircle.

10 Meanwhile, it is preferable that the body includes: a first body which is in contact with the thumb at the outer surface thereof; and a second body which is in contact with the index finger at the outer surface thereof, wherein the first body has a plurality of first projections formed on the inner surface
15 thereof, each of the plurality of first projections having a through-hole formed therein, and the second body has a plurality of second projections formed on the inner surface thereof to correspond to the plurality of first projections, such that each of the plurality of second projections is forcedly fitted into
20 the corresponding through-hole of the plurality of first projections.

It is preferable that the body further includes a third body formed on the upper portions of the first and second bodies for covering the coupling part and the slip prevention part
25 formed inside the body.

The slip prevention part may be an elastic member formed on one side or both sides of the inner surfaces of the first and second bodies for applying an elastic force to the outer circumferential surface of the writing tool.

It is preferable that the elastic member is an arc-shaped plate type spring fragment having a predetermined curvature radius, and both ends of the spring fragment are locked and supported by a support portion formed on the inner surface of the first body or the second body.

It is preferable that the first body or the second body has a slip prevention layer laminated on the outer surface thereof, the slip prevention layer being made of rubber material or elastic resin material having a predetermined friction force.

It is preferable that at least one of the thumb seating part, the index finger seating part, the middle finger seating part and the thumb support part further has a number of through holes and/or embossed portions formed on the outer surface thereof which is in close contact with the thumb and the index finger for absorbing and evaporating sweat to thereby keep a user's agreeable contact feeling.

In the present invention, the body has the same conception as the writing tools of the first to fourth embodiments, which will be described later, and a body, which will be described in the fifth embodiment later, is what an elastic fragment, which will be described later, is excluded.

Furthermore, the thumb and index finger seating parts are specific parts on which a user's thumb and index finger are seated on the body.

Brief Description of Drawings

Further objects and advantages of the invention can be more fully understood from the following detailed description taken in conjunction with the accompanying drawings in which:

FIG. 1 is a perspective view of a device for right grip of a writing tool according to a first preferred embodiment of the present invention;

FIG. 2 is a rear view of FIG. 1;

5 FIG. 3 is a sectional view taken along the line of A-A' of FIG. 2;

FIG. 4 is an exemplary view showing a used state of the device for right grip of the writing tool shown in FIGS. 1 to 3;

10 FIG. 5 is a perspective view of a device for right grip of a writing tool according to a second preferred embodiment of the present invention;

FIG. 5a is a perspective view of a side of FIG. 5;

FIG. 5b is a perspective view of the other side of FIG. 5;

15 FIG. 6 is a perspective view of a device for right grip of a writing tool according to a third preferred embodiment of the present invention;

FIG. 7 is a perspective view of a side of FIG. 6;

20 FIG. 8 is a perspective view of a device for right grip of a writing tool according to a fourth preferred embodiment of the present invention;

FIG. 9 is a bottom view of FIG. 8;

FIG. 10 is an exploded perspective view of a device for right grip of a writing tool according to a fifth preferred embodiment of the present invention;

25 FIG. 11 is a view showing a right grip posture; and

FIG. 12 is a view showing a wrong grip posture requiring the right grip posture.

Best Mode for Carrying Out the Invention

Hereinafter, the present invention will now be described in detail in connection with preferred embodiments with reference to the accompanying drawings. The present invention is described with reference to the particular illustrative embodiments, but it is not to be restricted by the embodiments.

[Embodiments]

[First Embodiment]

FIG. 1 is a perspective view of the device 10 for right grip of the writing tool according to a first preferred embodiment of the present invention, FIG. 2 is a rear view of FIG. 1, FIG. 3 is a sectional view taken along the line of A-A' of FIG. 2, and FIG. 4 is an exemplary view showing a used state of the device 10 for right grip of the writing tool shown in FIG. 3.

Referring to FIGS. 1 to 4, the device 10 for right grip of the writing tool has an ergonomically curved surface, so that a user can naturally grasp exact grip parts grasped by the user's thumb (t), index finger (f) and middle finger (m), i.e., a thumb seating part 11, an index finger seating part 12 and a middle finger seating part 14.

In more detail, the device 10 for right grip of the writing tool has a thumb contact preventing part 17 and an index finger contact preventing part 18 angled or curved on the upper surface thereof (the surface formed at the upper portion in FIG. 1) for preventing a close contact of the thumb (t) and the index finger(m) to a writing tool(p).

A portion of the middle finger seating part 14 connected with the thumb seating part 11 extends horizontally, and thereby,

a thumb support part 13 for supporting the thumb. (t) projects to the surface of the thumb seating part 11.

Moreover, the thumb seating part 11, the index finger support part 13 and the middle finger seating part 14
5 respectively have a number of through holes 15 formed on their surfaces, and the through holes 15 serve to absorb sweat generated when the user uses the writing tool (P) for a long time or in hot weather such as summer.

At this time, the device 10 for right grip of the writing
10 tool further includes an insertion hole (H) extending diagonally from the upper portion to the lower portion thereof at a predetermined angle, and a friction protrusion 16 spirally formed on the inner surface of the insertion hole (H) and
advancing from the upper portion to the lower portion of the
15 device 10 (see FIG. 3).

The friction protrusion 16 provides friction force to the writing tool (P) for preventing movement of the writing tool (P) so that the writing tool (P) is easily inserted into the insertion hole (H) and is not moved upwardly.

20 Furthermore, the friction protrusion 16 is not restricted to the above form, and may have various forms. That is, the friction protrusion 16 may be in the form of a semicircle, a circle, a bar or a net. It is preferable that the form of the friction protrusion 16 is made in consideration of easy
25 insertion of the writing tool (p) into the insertion hole (H) and prevention of movement of the writing tool (P) during writing.

[Second Embodiment]

FIGS. 5, 5a and 5b are perspective view of a device 20 for

right grip of the writing tool according to a second preferred embodiment of the present invention. In FIGS. 5, 5a and 5b, the thumb support part 13 described in the first embodiment is omitted.

5 In more detail, as the thumb support part 13 may provide adults having big hands with inconvenience and omission of the thumb support part 13 allows economy of materials, the second embodiment of the present invention can provide the user with low-priced writing tool by reducing manufacturing costs.

10 In addition, the second embodiment of the present invention has a number of embossed portions 25 formed on the surfaces of a thumb seating part 21 and an index finger seating part 22 so as to prevent slip of the writing tool (P) and provide a finger pressing effect.

15 The embossed portions 25 can have various forms. For example, to maximize a slip prevention function, it is preferable that the embossed portions 25 are in the form of a fingerprint formed on human's fingers. Alternatively, to maximize a finger pressing efficiency, it is preferable tat the
20 embossed portions 25 are in the form of a cone or a hemisphere.

Furthermore, the through holes 15 described in the first embodiment may be formed between the embossed portions 25.

[Third Embodiment]

25 FIG. 6 is a perspective view of a device 30 for right grip of the writing tool according to a third embodiment of the present invention, and FIG. 7 is a perspective view showing a side of FIG. 6. FIGS. 6 and 7 show a different structure for coupling the writing tool (P) to the device 30 for right grip of

the writing tool.

FIGS. 6 and 7 show an improved structure of the devices 10 and 20 described in the first and second embodiments. In a side surface of the body of the device 30 for right grip of the writing tool, namely, between a thumb seating part 32 and a middle finger seating part 34, the insertion hole described in the first and second embodiments is cut, and so, has a U-shaped groove 36 having the same diameter as the writing tool(P) is formed, so that the writing tool(P) can be easily inserted into the device 30 laterally.

In more detail, the device 30 according to the third embodiment includes a guide portion 35 formed by the U-shaped groove 36, and a locking jaw 37 formed on the guide portion 35 for preventing a lateral separation of the writing tool (P) after the writing tool (P) is inserted into the groove 36.

It is preferable that the friction protrusion 16 described in the first embodiment is formed on the inner surface of the groove 36 for preventing movement of the writing tool (P).

In addition, the through holes 15 described in the first embodiment and the embossed portions 25 described in the second embodiment may be selectively formed on the surfaces of a thumb seating part 31 and the index finger seating part 32.

[Fourth Embodiment]

FIG. 8 is a perspective view of a device 40 for right grip of the writing tool according to a fourth preferred embodiment of the present invention, and FIG. 9 is a bottom view of FIG. 8. In the fourth embodiment, the middle finger seating part 34 described in the third embodiment is omitted, and a U-shaped

groove 46 is formed in place of the insertion hole (H) by cutting the entire bottom end portion of the writing tool 40. The fourth embodiment minimizes the manufacturing costs, and can be mainly used by adults rather than children.

5 As in the third embodiment, the device 40 has the friction protrusion 16, which is described in the first embodiment, formed on the inner surface of the groove 46 for preventing movement of the writing tool (p). The through holes 15 described in the first embodiment and the embossed portions 25 described
10 in the second embodiment may be selectively formed on the surfaces of a thumb seating part 41 and an index finger seating part 42.

 The devices described in the first to fourth embodiments are single composite products, but not injection-molded products,
15 and are made of one of rubber material, natural rubber material, elastic resin material, synthetic resin material, and so on. It is preferable that the material of the devices is selected in consideration of elastically restoring force.

20 **[Fifth Embodiment]**

 FIG. 10 is an exploded perspective view of a device 50 for right grip of the writing tool according to a fifth preferred embodiment of the present invention. The device 50 is an assembly of injection-molded products made of synthetic resin.
25 The device 50 according to the fifth embodiment can reduce a strain modulus due to frequent attachment and detachment of the writing tool (P), and allow the user to use writing tools (P) of various thicknesses.

 In more detail, the device 50 according to the fifth

embodiment includes a first body 50a for holding the index finger (f) on the outer surface thereof, a second body 50b for holding the thumb(t) on the outer surface thereof, and a third body 50c for finishing and coupling the upper portions of the first and second bodies 50a and 50b.

The third body 50 can be formed on the first and second bodies 50a and 50b or by coupling of the first and second bodies 50a and 50b as it may be formed by coupling the first and second bodies.

At this time, the first body 50a has first projections 51 formed on the inner surface thereof, each of which has a through-hole formed therein, and the second body 50b has second projections 52 formed on the inner surface thereof to correspond to the first projections 51, such that each of the plurality of second projections 51 can be forcedly fitted into the corresponding through-hole of the first projections 52.

Furthermore, the first body 50a has a support portion 56 formed on the inner surface thereof, and locking fragments 57 of a predetermined length formed at both ends of the support portion 56 in a horizontal direction. At this time, an elastic member is inserted into the support portion 56. The elastic member is an arc-shaped plate type spring fragment 55 having a predetermined curvature radius. After the spring fragment 55 is inserted into the support portion 56, both ends of the spring fragment 55 are locked and supported by the locking fragments 57.

The spring fragment 55 mounted on the support portion 56 has a plate type support fragment 58 having a predetermined surface.

Moreover, the second body 50b has an asymmetric guide wing

54 laterally protruding from a portion of the inner surface thereof to correspond to an area between the spring fragment 55 and the support fragment 58 of the first body 50a. In addition, the second body 50b has an insertion hole (H) formed in the front end thereof, and the first body 50a has an insertion hole (H) formed in the rear end thereof. So, the writing tool (P) can be inserted into the insertion hole (H) of the first body 50a and drawn out from the insertion hole (H) of the second body 50b formed by coupling the first and second bodies 50a and 50b, and thereby the writing tool (P) is fixed to the device 50.

A method for coupling the writing tool (P) to the device 50 will be described as follows. When the writing tool (P) is inserted through the insertion hole (H) formed at the rear end of the first body 50a, the writing tool (P) is guided between the spring fragment 55 and the support fragment 58 by the guide wing 54, and supported on the support fragment 58 in a state where a predetermined compression force is applied onto the outer circumferential surface of the writing tool (P) by the spring fragment 55, and thereby, the writing tool (P) is drawn out to the insertion hole (H) of the second body 50b.

It is preferable that a slip prevention layer (not shown in the drawing) made by a double injection molding of rubber material or elastic resin material, which has a predetermined friction force, is located on the surfaces of the first, second and third bodies 50a, 50b and 50c so as to provide a soft touch feeling and increase friction force.

Industrial Applicability

As described above, the device for right grip of the

writing tool according to the present invention can naturally correct the user's wrong grip posture, and prevent loss of concentration power and deformity of fingers by reducing the user's fatigue generated during writing.

5 While the present invention has been described with reference to the particular illustrative embodiments, it is not to be restricted by the embodiments but only by the appended claims. It is to be appreciated that those skilled in the art can change or modify the embodiments without departing from the
10 scope and spirit of the present invention.

What is claimed is:

1. A device for right grip of a writing tool comprising:
a body having a curved surface;

5 a thumb contact preventing part and an index finger contact preventing part curved on the upper surface of the body in the same form as a space formed between a user' thumb and index finger in a state where the user grasps the writing tool with the thumb and the index finger so as to prevent a close contact
10 of the thumb and the index finger with the writing tool, the thumb contact preventing part and the index finger contact preventing part being in contact with the upper surface of the body;

a thumb seating part formed on the side wall surface of the
15 lower portion of the thumb contact preventing part for seating the thumb thereon;

an index finger seating part formed on the side wall surface of the lower portion of the index finger contact preventing part for seating the index finger thereon;

20 a middle finger seating part downwardly extending from the front and lower portion of the body to a portion, where the writing tool and the user's middle finger are in contact with each other, for supporting a part of the middle finger; and

a coupling part for fixing the writing tool to the body at
25 a predetermined angle.

2. The device for right grip of a writing tool according to claim 1, further comprising a thumb support part laterally extending from the middle finger seating part for supporting the

thumb.

3. The device for right grip of a writing tool according to claim 1 or 2, wherein the coupling part is an insertion hole
5 perforating the body at a predetermined gradient for inserting and fixing the writing tool thereto.

4. The device for right grip of a writing tool according to claim 1, wherein the coupling part is a groove cut on a side
10 section of the body at a predetermined angle for forcedly fitting the writing tool into a side surface of the body.

5. The device for right grip of a writing tool according to claim 4, wherein the groove is formed on a side portion of
15 the thumb and index finger seating parts, which contacts the index finger, or on the lower end surface of the body.

6. The device for right grip of a writing tool according to claim 3, wherein the insertion hole has a slip prevention part formed on the inner circumferential surface thereof to be
20 in close contact with the outer circumferential surface of the writing tool for preventing slip of the writing tool, the slip preventing part having a protrusion being in the form of a bar, a net, a circle, a semicircle, or a screw thread.

25 7. The device for right grip of a writing tool according to claim 4 or 5, wherein the groove has a slip prevention part formed on the inner surface thereof in the form of a bar, a net, a circle, a semicircle, or a screw thread to be in close in contact with the outer circumferential surface of the writing

tool for preventing slip of the writing tool.

8. The device for right grip of a writing tool according to claim 1 or 2, wherein the body includes:

5 a first body which is in contact with the thumb at the outer surface thereof; and

a second body which is in contact with the index finger at the outer surface thereof,

wherein the first body has a plurality of first projections
10 formed on the inner surface thereof, each of the plurality of first projections having a through-hole formed therein, and the second body has a plurality of second projections formed on the inner surface thereof to correspond to the plurality of first
15 projections, such that each of the plurality of second projections is forcedly fitted into the corresponding through-hole of the plurality of first projections.

9. The device for right grip of the writing tool according to claim 8, wherein the body further includes a third body for
20 forming the upper surface thereof.

10. The device for right grip of the writing tool according to claim 8, a slip prevention part is made of elastic member formed on one of the inner surfaces of the first and
25 second bodies, for applying an elastic force to the outer circumferential surface of the writing tool.

11. The device for right grip of the writing tool according to claim 10, wherein the elastic member is an arc-

shaped plate type spring fragment having a predetermined curvature radius, and both ends of the spring fragment are locked and supported by a support portion formed on the inner surface of the first body or the second body.

5

12. The device for right grip of the writing tool according to any one of claims 8 to 11, wherein the first body or the second body has a guide wing formed protrudingly on the inner surface thereof to correspond to the spring fragment for
10 guiding the writing tool to the spring fragment.

13. The device for right grip of the writing tool according to any one of claims 8 to 11, wherein the first body or the second body has a slip prevention layer laminated on the
15 outer surface thereof, the slip prevention layer being made of rubber material or elastic resin material having a predetermined friction force.

14. The device for right grip of the writing tool
20 according to claim 12, wherein the first body or the second body has a slip prevention layer laminated on the outer surface thereof, the slip prevention layer being made of rubber material or elastic resin material having a predetermined friction force.

25 15. The device for preventing slip of the writing tool according to claim 1 or 2, wherein at least one of the thumb seating part, the index finger seating part, the middle finger seating part and the thumb support part further has a number of through holes and/or embossed portions formed on the outer

surfaces thereof which is in close contact with the thumb and the index finger.

1/7

Fig.1

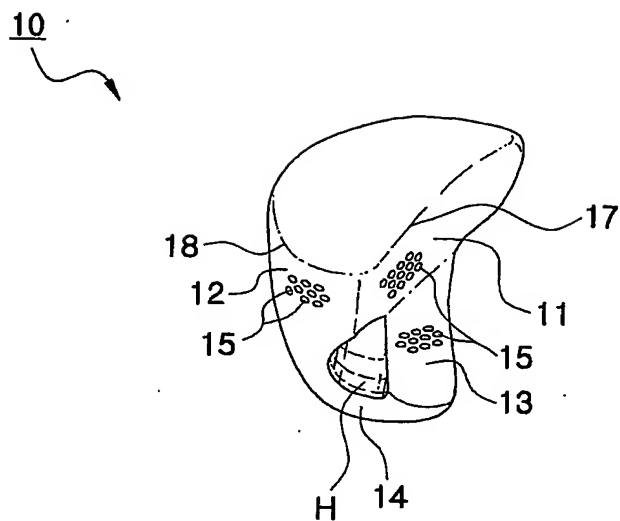


Fig.2

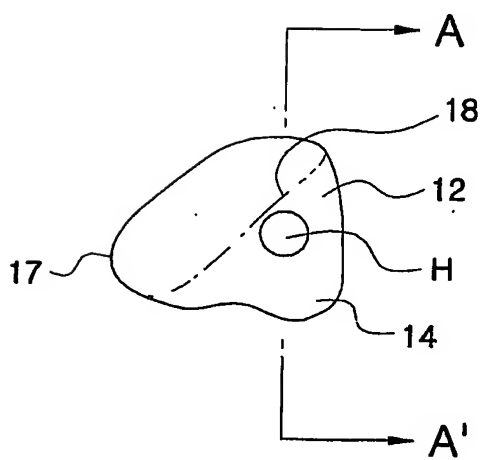


Fig.3

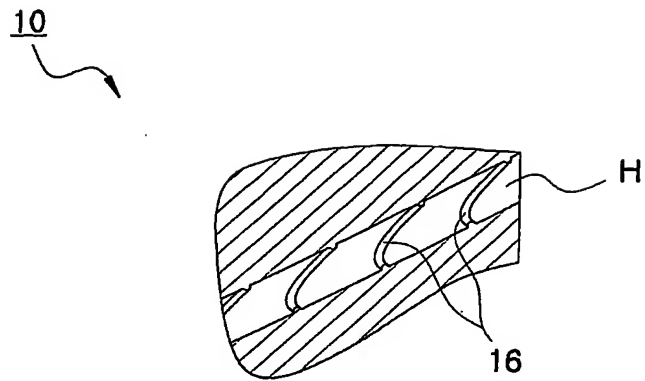


Fig.4

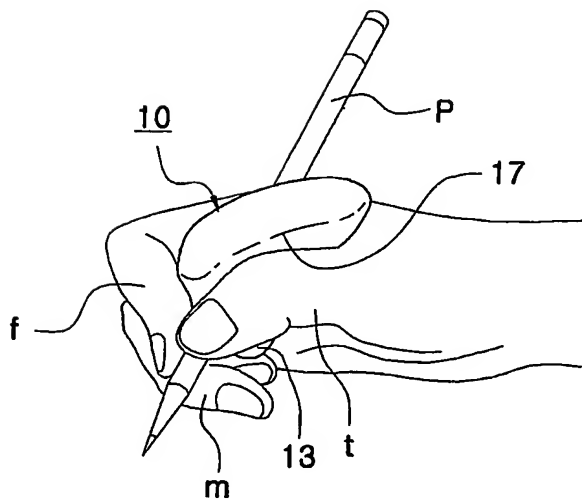


Fig.5

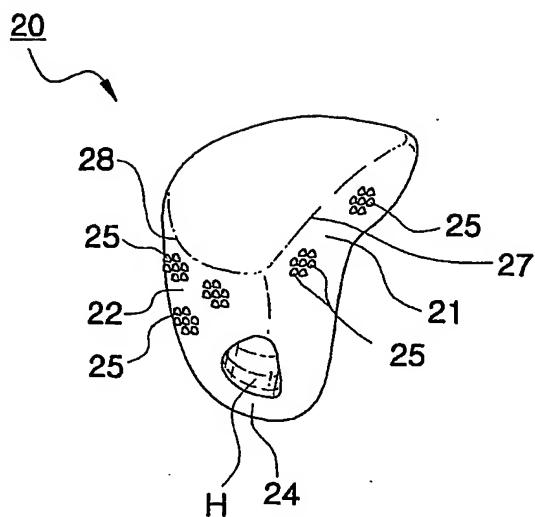


Fig.5a

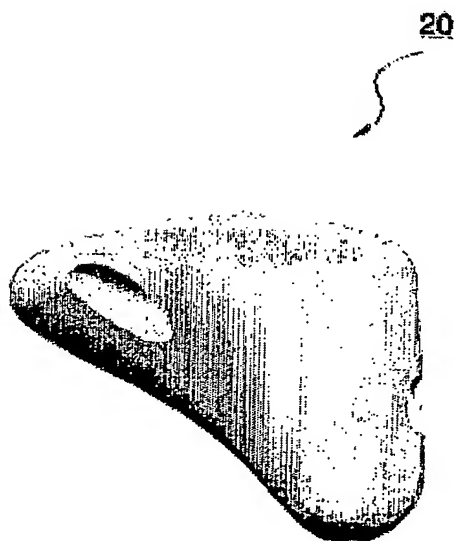


Fig.5b

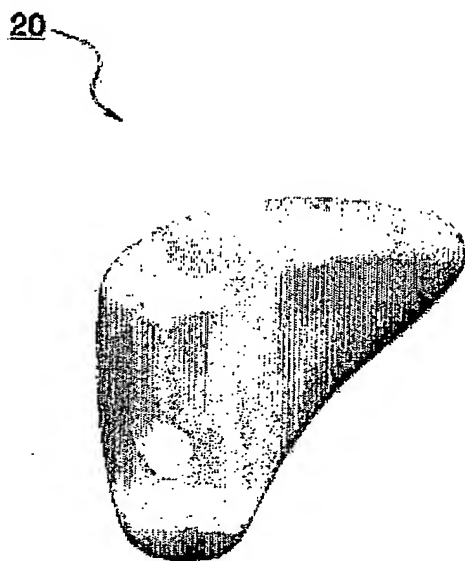


Fig.6

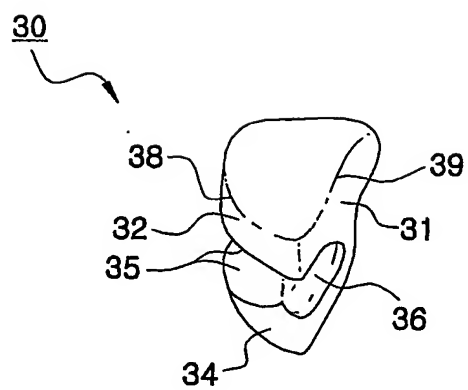


Fig.7

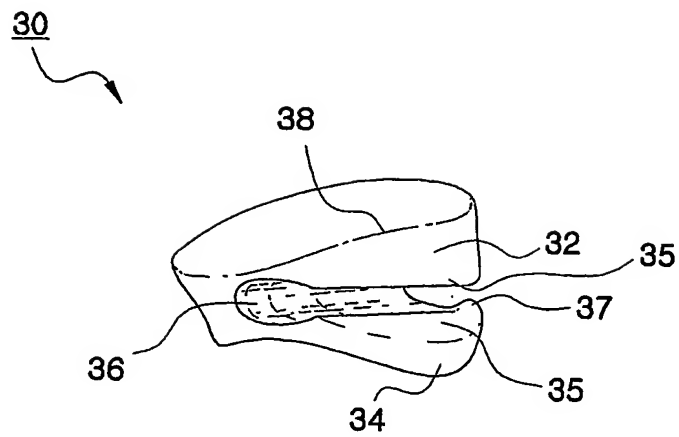


Fig.8

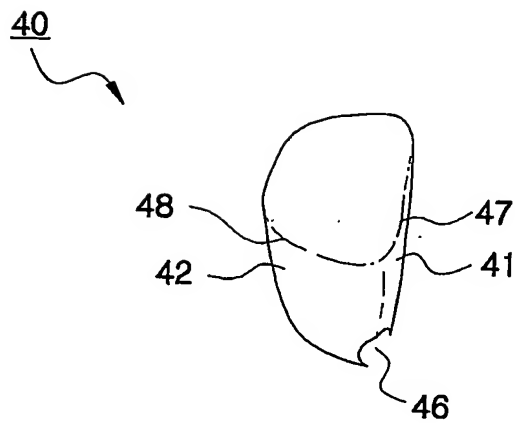


Fig.9

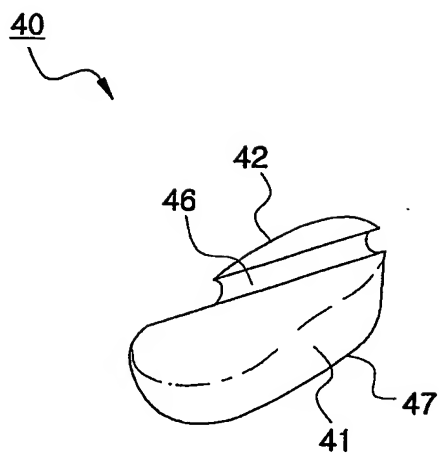


Fig.10

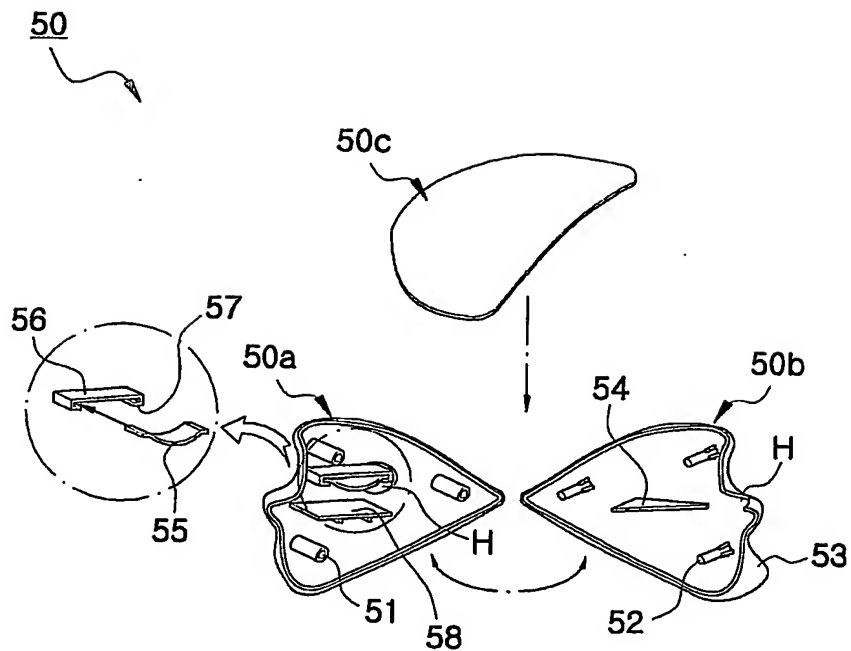


Fig.11

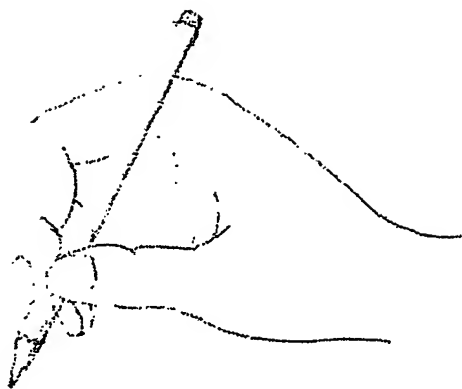
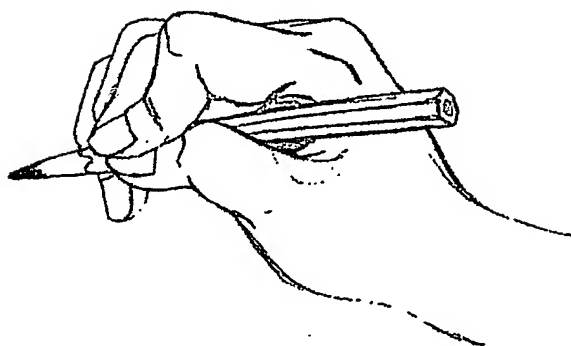


Fig.12



INTERNATIONAL SEARCH REPORT

International Application No.
PCT/KR 04/000387

A. CLASSIFICATION OF SUBJECT MATTER

IPC7 B43K 23/008

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7 B43K 23/00, B23K 23/012

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean Patents and Utility Models published since 1982

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	JP S52-097814 A (Itzuko Takashima) August 17, 1977 (See Figures 1-5)	1, 2, 3
X, P	KR 20-0324098 Y1 (Seung-O Bae) August 11, 2003 (See Figure 1)	1, 2, 3
Y	US 5626430 (Carl Bistrack) May 6, 1997 (Read column 5 lines 5-6 and see the figure 7a.)	15
Y	KR 20-0261344 Y1 (RFO TECHNOLOGY Co., LTD.) January 24, 2002 (See the element of the invention corresponding to the reference sign 250 of the figures 1,2, and 5)	15
A	KR 88-21639 U (Se-Yeop Lee) December 24, 1988 (See Figures 1-3)	1, 2, 3

☐ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

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Date of the actual completion of the international search

08 JUNE 2004 (08.06.2004)

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INTERNATIONAL SEARCH REPORT

Information on patent family members

international application No.

PCT/KR2004/000387

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
JP S52-097814 A	August 17, 1977	NONE	
KR 20-0324098 Y1	August 11, 2003	NONE	
US 5626430	May 6, 1997	NONE	
KR 20-0261344 Y1	January 24, 2002	WO 03/029022 A1	April 10, 2003
KR 88-21639 U	December 24, 1988	NONE	